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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.



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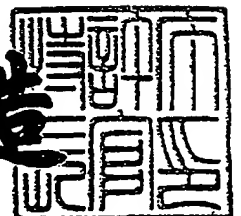
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TITLE OF INVENTION

NETWORK SERVICE PAYBACK SYSTEM

CLAIMS

5 1. A payback system for making payback to
a distributor of a terminal that allows a network
service to be provided to a customer for a fee, the
network service payback system comprising:

10 distribution channel storage means for
storing the distributor of the terminal in
association with terminal identification information
for identifying the terminal;

15 terminal information storage means for
storing customer identification information for
identifying the customer and the terminal
identification information registered with a network
service provider by the customer, the customer
identification information being associated with the
terminal identification information; and

20 payback calculation means for calculating
a payback value to be paid to the distributor by the
network service provider based on the customer
identification information stored in the terminal
information storage means in association with the
25 terminal identification information stored in the
distribution channel storage means, and on use
result information of the network service, the use
result information being separately collected and
associated with the customer identification
30 information.

35 2. The network service payback system as
claimed in claim 1, wherein the use result
information is a charge for use of the network
service by the customer.

3. The network service payback system as

claimed in claim 1, wherein the use result information is a period of registration of the customer with the network service.

5 4. A computer-readable recording medium having recorded therein a payback processing program for making payback to a distributor of a terminal that allows a network service to be provided for a fee to a customer, the program causing a computer to
10 function as:

 distribution channel storage means for storing the distributor of the terminal, the distributor being associated with terminal identification information for identifying the
15 terminal;

 terminal information storage means for storing customer identification information for identifying the customer and the terminal identification information registered with a network
20 service provider by the customer, the customer identification information being associated with the terminal identification information; and

 payback calculation means for calculating a payback value to be paid to the distributor by the
25 network service provider based on the customer identification information stored in the terminal information storage means in association with the terminal identification information stored in the distribution channel storage means, and on use
30 result information of the network service, the use result information being separately collected and correlated with the customer identification information.

35 DETAILED DESCRIPTION OF THE INVENTION
 TECHNICAL FIELD

 The present invention relates to payback

systems associated with network services provided for a fee to individual clients connected to a network. The "client" herein refers to dedicated software that runs on a dedicated terminal or a
5 general-purpose terminal such as a personal computer, which are also what the "terminal" stated in the claims refers to. A server may be a CATV company, satellite communications company, or an Internet provider. A client may be a set-top box for
10 receiving various channels or information via a network or a server, or dedicated software installed on a personal computer for accessing a particular server.

15 CONVENTIONAL ART

At present, a variety of network services are provided for a fee by systems consisting of servers and clients. Some of these pay network services perform service management with machine IDs
20 (terminal IDs) and user IDs, and provide a variety of services for a fee via networks by charging user IDs registered in specific machines. Others provide services by charging user IDs registered in specific users' machines such as personal computers in which
25 given special terminal software is installed.

A client (a terminal or terminal software) is sold with a product warranty. The purpose of the warranty is, as its name implies, to provide a guarantee if something is wrong with a product. In
30 addition to a conventional warranty in the form of a paper card that comes with a product, an electronic warranty has been proposed. For instance, Japanese Laid-Open Patent Application No. 10-105626 (An electronic warranty issuance and management method
35 and system) discloses a method of electronically sharing information related to the warranty of a sold product among the manufacturer, distributor,

and purchaser of the product.

PROBLEMS TO BE SOLVED BY THE INVENTION

Generally, in network services, it is a
5 key to the improvement of business performance for a
server to obtain many clients and have the clients
use many network services. For that purpose, first
of all, a large amount of attractive information
should be provided, and it is necessary to obtain a
10 large number of unspecified users on networks.

On the other hand, each user needs a
special client in terms of hardware and software for
information transmission to and reception from the
server, so that the clients are expected to be
15 distributed and spread effectively among the users.

Therefore, in the network services, there
is a general tendency to sell the clients at lower
prices, and in some cases, special terminal software
used in personal computers, which can be provided
20 on-line via networks, is distributed free. That is,
income from the network services does not depend on
income from the sales of the clients that are tools
for connection, but the network services profit by
having their menus used. Accordingly, in many cases,
25 the server can expect an income from its services
continuously for a long period of time.

For the above-described reason, payback is
often provided to client distributors, who
distribute clients for free or at low prices, as an
30 incentive to sales network expansion and client
distribution. Conventionally, the payback has been
made only by an easy method such as a distributor's
own request. For instance, a distributor has been
paid back a certain commission on the sales of one
35 client.

However, the problem has been an effective
means of realizing mass distribution and sales of

clients as a means of obtaining more customers and promotion of using more network services continuously for a long period of time, and a solution to the problem has been sought.

5 In consideration of the above-described point, the present invention has an object of providing payback means to pay back customers receiving products for free or payment with an incentive to product distribution and utilization
10 support.

MEANS OF SOLVING THE PROBLEMS

 The above objects of the present invention are achieved by a network service payback system
15 having a below-described structure.

 FIG. 1 is a diagram of a payback system for payback to a terminal distributor in a network service provided for a fee to each customer through a distributed terminal, in which the numeral 1
20 represents distribution channel storage means for storing the terminal distributor of a terminal with the terminal distributor being correlated with terminal identification information for identifying the terminal, the numeral 2 represents terminal
25 information storage means for storing customer identification information for identifying the customer and the terminal identification information registered with a network service provider by the customer with the customer identification
30 information being correlated with the terminal identification information. The numeral 4 represents payback calculation means for calculating a payback value to be paid to the terminal distributor by the network service provider based on
35 the customer identification information stored in the terminal information storage means 2 so as to be correlated with the terminal identification

information stored in the distribution channel storage means 1 and on network service use result information 3 separately collected and correlated with the customer identification information.

5

EMBODIMENTS OF THE INVENTION

FIG. 2 is a diagram for illustrating a mode for carrying out the present invention. The numeral 21 represents a service provider of a
10 network service, the numeral 22 a terminal distributor, the numeral 24 a user terminal, and the numeral 23 a network connecting them. A description will be given below of their relations in the network service.

15 The service provider 21 consigns the distribution of terminals to the terminal distributor 22. Each terminal, if hardware (product), can be identified by a production number or a serial number assigned thereto at the time of
20 shipment. If the terminals to be distributed are software, the terminals are provided in the form of CD-ROMs each storing a program functioning in a personal computer, or are provided on-line on the network. Each provided unit is indicated by a
25 serial number. Here, a serial number is taken as a terminal ID so that both hardware and software terminals can be treated.

The terminal distributor 22 sells or distributes hardware terminals such as set-top boxes
30 or electronic media recorded with software, such as CD-ROMs, to users over the counter. With respect to a product for a fee, the terminal distributor 22 issues a warranty recorded with a terminal serial number and user information at the time of sale as a
35 guarantee on the product, and hands the warranty to a user and notifies the service provider 21 who has asked for the distribution. Free terminal software

is never distributed with a warranty, but the service provider 21 is notified of a distributed terminal ID, or a serial number assigned to the medium, together with user information. Thereby,
5 the service provider 21 can be informed of the terminal ID (serial number) of a terminal distributed by the terminal distributor 22.

Next, the user who has obtained the terminal presents the terminal serial number and
10 other user information and obtains a user ID issued by the service provider 21 at the first connection with the service provider 21 through the network. At this time, in order to record network service use results, the service provider 21 can record the
15 serial number that is the terminal ID and the user ID as correlated data.

Thereafter, the user can access the service provider 21 from the user terminal 24 to receive the network service. The service provider
20 21 can collect a user charge based on the use results from the user terminal 24, that is, based on a connection fee and used functions.

Based on the above-described use results, a payback is made to the terminal distributor 22 in
25 accordance with a contribution to an income obtained from the network service business. That is, the payback is made to the terminal distributor 22 based on the terminal ID of the user terminal 24.

The effects of the present invention can
30 be produced whether the software is provided on-line with the same serial number or with a representative number replacing the serial number so that the terminal distributor 22 of the software can be specified.

35 A description will be given below of a payback calculation means of a payback system at a time of providing the network service.

FIG. 3 is a diagram showing a structure of the mode for carrying out the present invention.

This mode is realized by a computer program executed in a multi-purpose computer such as
5 a personal computer or a workstation.

The network service payback system of the present invention is realized by executing a computer program in a computer including a processor, a main storage, an auxiliary storage, and an input-
10 output unit. The provided computer program is stored in a portable medium such as a floppy disk or a CR-ROM, or in the main storage or auxiliary storage of another computer connected to the network. A recording medium of the present invention
15 corresponds to the above-described portable medium, main storage, or auxiliary storage.

The provided computer program, before being executed, is loaded into the main storage of the computer directly or after being temporarily
20 copied to or installed in the auxiliary storage from the portable medium. In the case of being provided from a storage of another apparatus connected to the network, the computer program is copied to the auxiliary storage and loaded into the main storage
25 to be executed after being received from the apparatus by way of the network.

In FIG. 3, a terminal distribution management part 33 predetermines a terminal distributor of each terminal based on its serial
30 number before the distribution of the terminals, or matches a terminal distributor with the serial number of a terminal on receiving a returned warranty at a time of selling the terminal. The terminal distribution management part 33 sets this
35 correspondence input from an input part 30 in a distribution channel information file 36.

A terminal information management part 34

correlates the serial number of the terminal with a user ID issued by a network service part 35 to set the serial number and the user ID in a terminal information file 37 in the first user registration
5 made by a user obtained the terminal to receive the network service.

The network service part 35 provides the network service to a user terminal 39 and records network service use results from the user terminal
10 in a use result information file 38.

A payback calculation part 32 calculates payback to be made to the terminal distributor of the terminal based on the information stored in the above-described distribution channel information
15 file 36, terminal information file 37, and use information file 38.

A description will be given below of the stored state of each file and a payback calculation operation based on the files.

20 FIG. 4 shows a structure of the distribution channel information file 36, in which each terminal serial number is correlated with a corresponding terminal distributor ID. Like AAA001 through AAA005, the contents of the copies of the
25 warranties of hardware terminals which copies terminal distributors present to a service provider as sales evidence are registered, or, like BBB001 through BBB099, the service provider consigns the distribution of terminal software collectively to a
30 terminal distributor. Therefore, when a terminal ID (serial number) is given, the distributor of a corresponding terminal can be found out by searching the distribution channel information file 36.

FIG. 5 shows a structure of the terminal
35 information file 37. When a user makes user registration to receive the network service, the user sends a terminal serial number as the ID of an

obtained terminal to the service provider by way of on-line conversation. As a result of this registration, a user ID is provided to the user. When the user ID is provided, the serial number of the user terminal can be found out by searching the terminal information file with the key of the user ID.

FIG. 6 is a diagram of a structure of the use result information file 38. When the network service is received, a period of use and used functions are recorded, and a user charge is calculated by the given period or the user ID based on the period of use and the used functions to be stored in the use result information file 38, being correlated with the user ID. The date of user registration is also recorded as a registration date.

FIG. 7 shows a flowchart of an operation of the payback calculation part 32. Shown herein is a payback calculation operation with respect to one terminal distributor. That is, a description will be given of an operation of outputting the calculation result of payback corresponding to a terminal distributor ID indicated from the input part 30.

In step S71, the ID of a terminal distributor to which payback is made is input from the input part 30. In step S72, by searching the distribution channel information file 36 with the key of the specified terminal distributor ID, corresponding serial numbers, that is, all the terminals distributed by the specified terminal distributor, are searched out to be stored temporarily.

In step S73, the terminal information file 37 is searched for user IDs corresponding to the temporarily stored terminal serial numbers, and the user IDs are temporarily stored. The user IDs

extracted herein represent users who have used the network service by means of the terminals distributed by the previously specified terminal distributor.

5 In steps S74 through S77, the results of use by each of the above-described extracted users are accumulated and summed up. If it is determined in step S76 that the summing of the use results of all the extracted user IDs is completed, in step S78,
10 the payback is calculated by multiplying the sum of the network service use results by a predetermined rate to be output to an output part 31.

 Here, the paid amount of a user charge is employed as the use results. However, the payback
15 may be calculated based on a registration period continuing from user registration up to the present. Although the predetermined rate is employed for calculation, another function or logic can be employed for the evaluation of the payback value.
20 Further, the payback may be calculated only by evaluating the fact that user registration is made at a time of calculating the payback, that is, the payback may be calculated based only on the number of users.

25

EFFECTS OF THE INVENTION

 As is apparent from the above description, according to the present invention, the payback can be made in accordance with a contribution to an
30 income from a service business (including a network service business) which contribution is made by obtaining users by distributing products, thus producing an industrial effect that terminal distributors are provided with an incentive to sales
35 network expansion for increasing users of services (including network services) and the services provided by the terminal distributors are vitalized

so as to contribute to the development of computerized society.

BRIEF DESCRIPTION OF THE DRAWINGS

5 FIG. 1 is a diagram of a structure of the present invention;

 FIG. 2 is a diagram for illustrating a mode for carrying out the present invention;

10 FIG. 3 is a diagram for illustrating the mode for carrying out the present invention;

 FIG. 4 is a diagram of a structure of a distribution channel information file;

 FIG. 5 is a diagram of a structure of a terminal information file;

15 FIG. 6 is a diagram of a structure of a use result information file; and

 FIG. 7 is a flowchart of an operation of a payback calculation part.

20 REFERENCE NUMERALS

- 1 DISTRIBUTION CHANNEL STORAGE MEANS
- 2 TERMINAL INFORMATION STORAGE MEANS
- 3 NETWORK SERVICE USE RESULT INFORMATION
- 4 PAYBACK CALCULATION MEANS

FIG.1

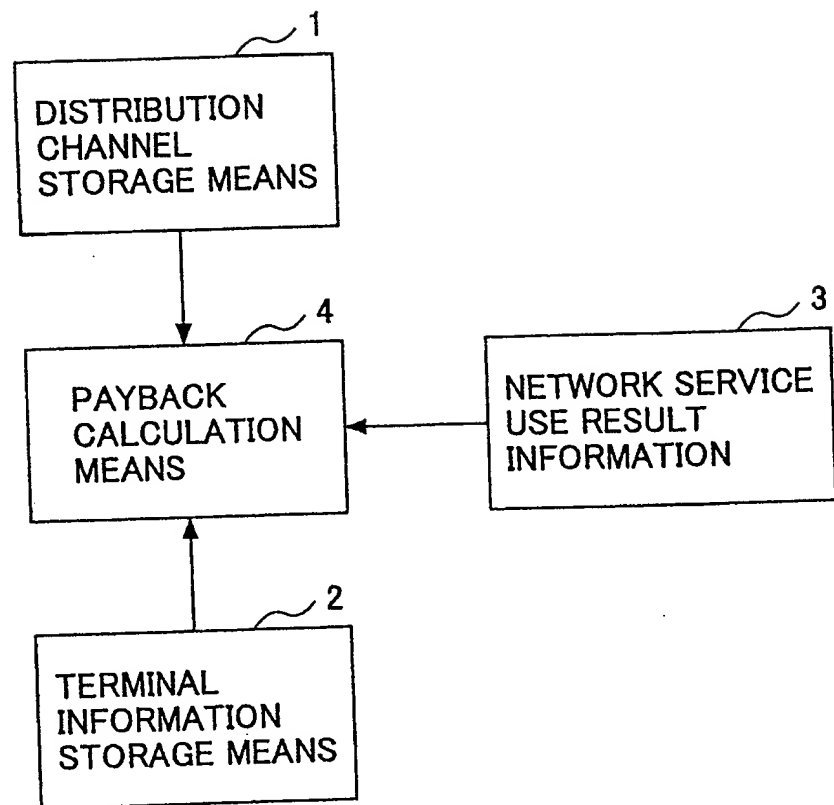


FIG.2

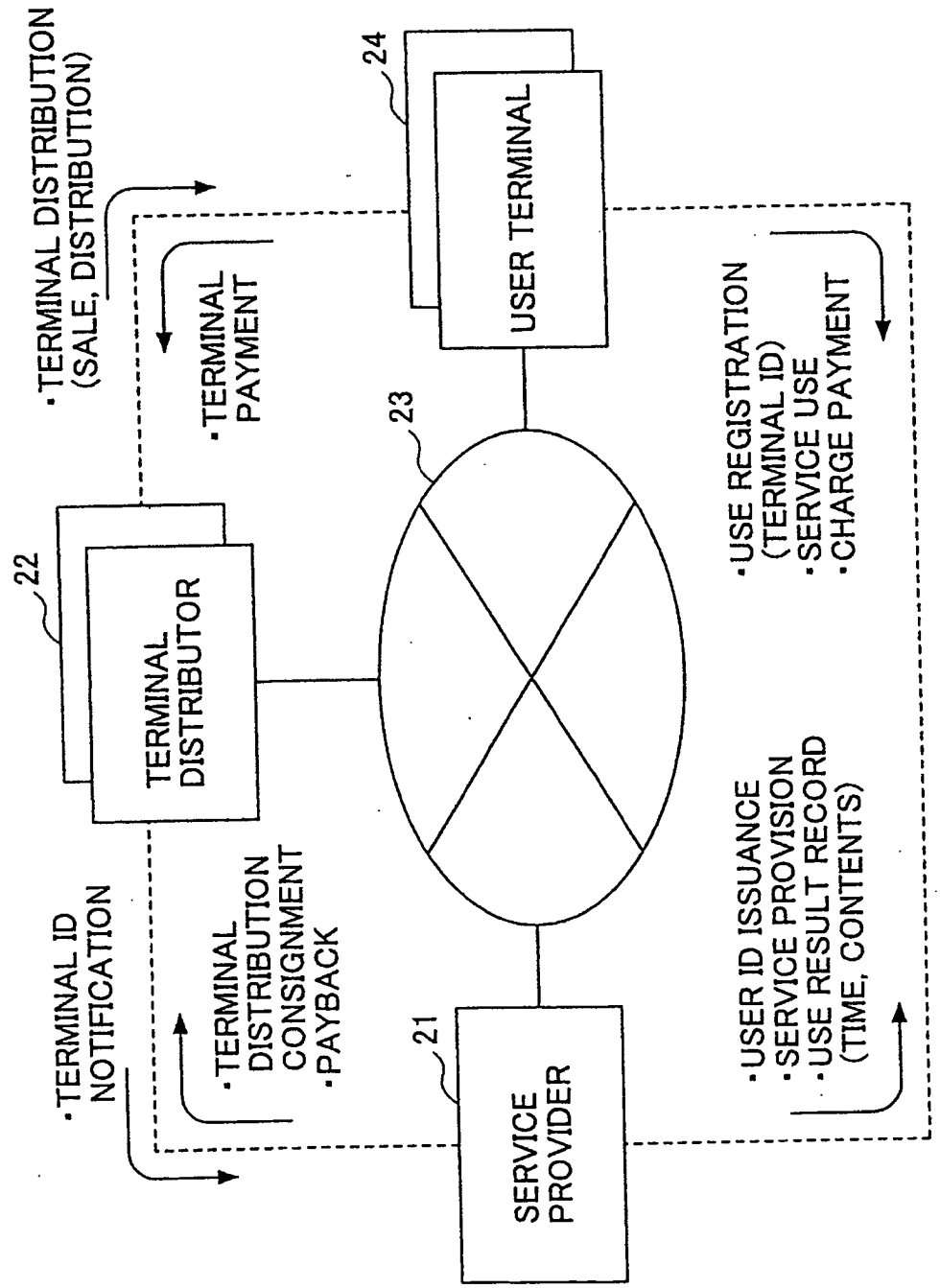


FIG.3

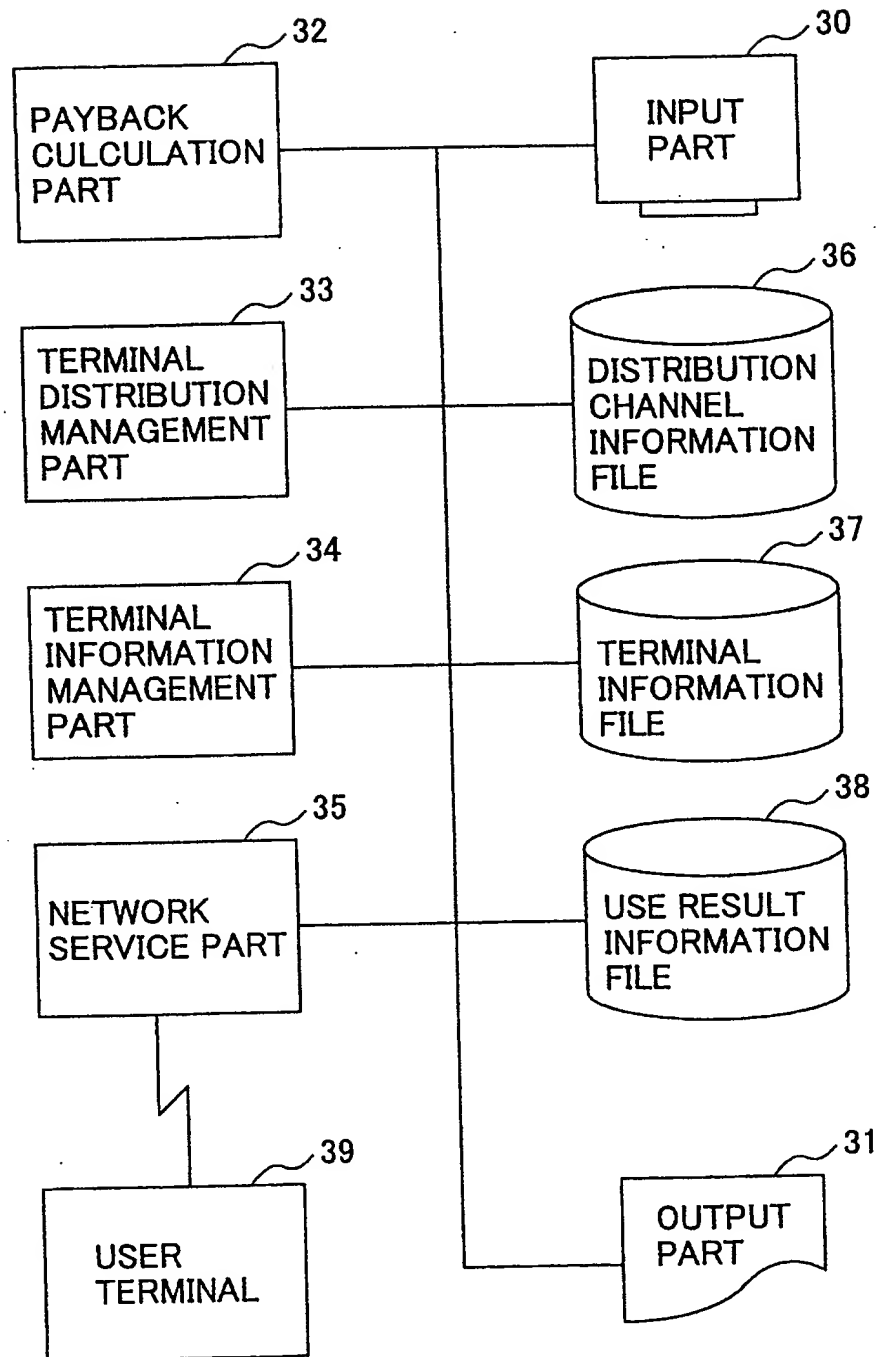


FIG.4

TERMINAL SERIAL NO.	TERMINAL DISTRIBUTOR ID
A A A 0 0 1	D 0 0 1
A A A 0 0 2	D 0 0 2
A A A 0 0 3	D 0 0 3
A A A 0 0 4	D 0 0 1
A A A 0 0 5	D 0 0 5
B B B 0 0 1 ~ B B B 0 9 9	D 0 1 0

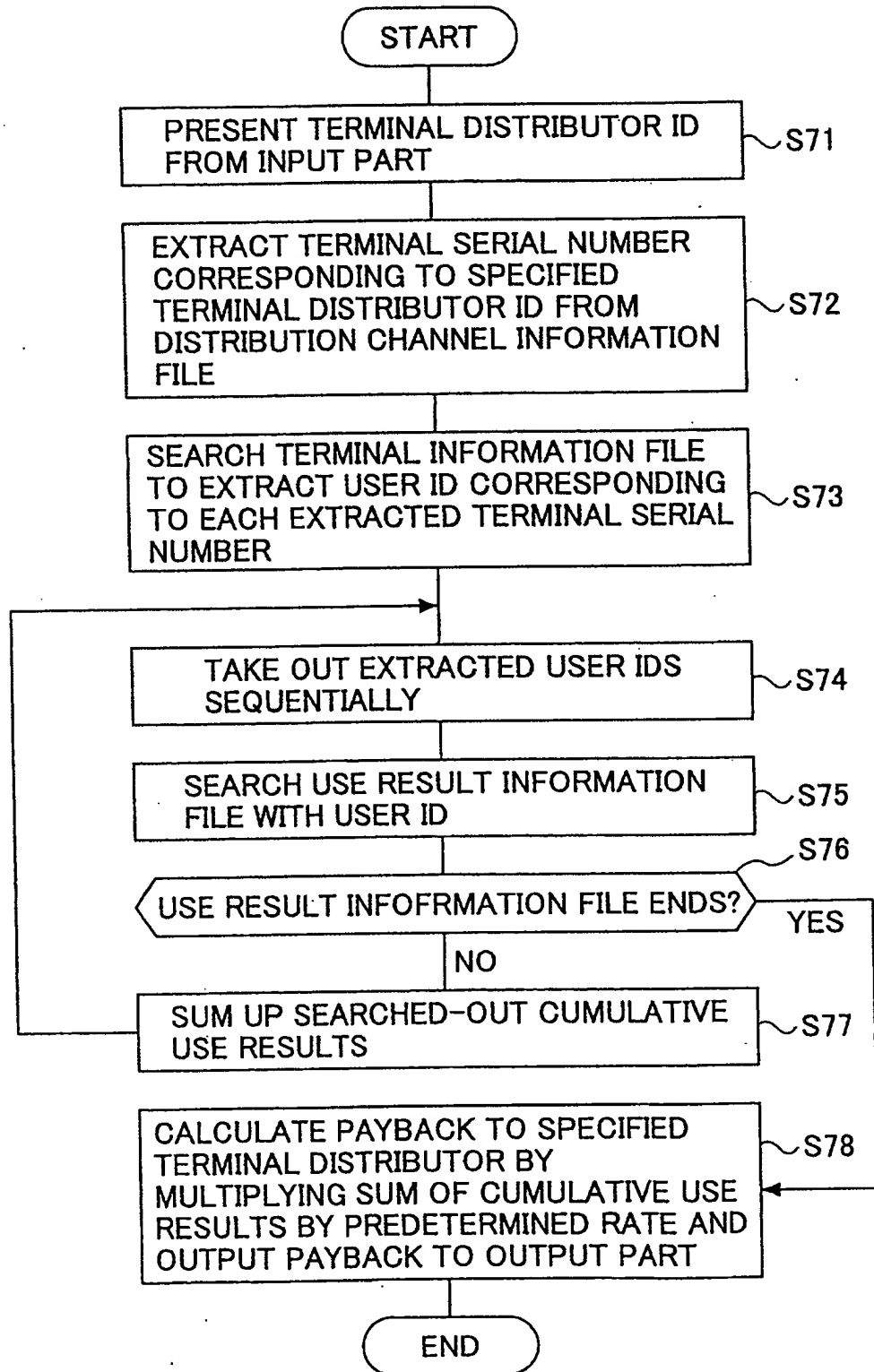
FIG.5

USER ID	TERMINAL SERIAL NO.
X X X 0 0 1	A A A 0 0 1
X X X 0 0 2	B B B 0 0 2
X X X 0 0 3	B B B 0 5 0
X X X 0 0 4	A A A 0 0 3
X X X 0 0 5	A A A 0 0 2

FIG.6

USER ID	REGISTRATION DATE	CUMULATIVE USE RESULTS
X X X 0 0 1	1 9 9 7 0 1 2 0	1 2, 0 0 0
X X X 0 0 2	- -	
X X X 0 0 4	1 9 9 8 1 1 1 0	5, 0 0 0
X X X 0 0 5	1 9 9 8 0 1 3 0	1 0, 0 0 0

FIG.7





ABSTRACT

(Object) A payback system for network services provided to individual clients for a fee provides an incentive to a distributor of clients for more
5 distribution and better utilization support.

(Solution) A payback system comprises distribution
channel storage means for storing the distributor of
the terminal in association with terminal
identification information; terminal information
10 storage means for storing customer identification
information for identifying the customer and the
terminal identification information registered with
a network service provider by the customer, the
customer identification information being associated
15 with the terminal identification information; and
payback calculation means for calculating a payback
value to be paid to the distributor by the network
service provider based on the customer
identification information stored in the terminal
20 information storage means in association with the
terminal identification information stored in the
distribution channel storage means, and on use
result information of the network service, the use
result information being separately collected and
25 associated with the customer identification
information.